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EXAMINER

PERSINO, RAYMOND B

ART UNIT	PAPER NUMBER
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2682

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,406

Applicant(s)

BOBST, HANSPETER

Examiner

Raymond B. Persino

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 April 2002 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 8, 9, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by GULLEDGE (US 5,490,204 A).

Regarding claim 1, GULLEDGE discloses a method for automated analysis of a mobile radio system in which, in accordance with the features according to Claim 1, a) between two end terminals (cellular radiotelephone system infrastructure 2, see column 5, line 9), in particular a mobile and a stationary or mobile end terminal, a plurality of test connections are produced within the framework of a test phase and b) during the test phase, a plurality of protocol parameter values are determined, this method already being configured in such a way that c) selected protocol parameter values are stored as a data set in a database with a suitable structure (laptop computer 7 in MQM 1, see Figure 2; ISA bus 80386 industrial computer in FQM 3, see Figure 3), d) stored protocol parameter values with a plurality of modules (MQM = mobile quality measurements 1, FQM = fixed quality measurements 3, see Figure 1) are evaluated, a module being used for evaluating the protocol parameter values with regard to an appraisal criterion, e) for each module, a module quality value is calculated as an average value of a plurality of

event quality values (READ MQM DATA 202, MATCH FQM DATA WITH MQM DATA 203, UPDATE STATISTIC RECORD 204, see Figure 23), the event quality values representing a quality measurement for each particular event type, f) to analyze the mobile radio system, a quality value (OQA = office quality analysis 4, statistical charts and graphs 4A, see Figure 1; END PROCESS OQA DATA MATCHING, see Figure 23) is calculated from the module quality values. (see in particular the abstract; column 4, line 57 to column 6, line 15; column 2, lines 45-57; column 3, lines 8-36; column 14, line 39 to column 15, line 28; Figures 1-3, 23-29B)

Regarding claim 2, see the rejection of the parent claim concerning the subject matter this claim depends from. GULLEDGE further discloses that the protocol parameters acquired comprise internal and/or external system protocol parameters, signaling messages being considered to be internal system protocol parameters and values measured from the outside being considered as external system protocol parameters (see in particular the abstract).

Regarding claim 3, see the rejection of the parent claim concerning the subject matter this claim depends from. GULLEDGE further discloses that a record is provided with a time stamp and allocated to a corresponding group of records in accordance with a predetermined grouping criterion. (column 10 lines 65-67).

Regarding claim 4, see the rejection of the parent claim concerning the subject matter this claim depends from. GULLEDGE further discloses that, for each module, at least one event table is generated in that a search is made in the database for predetermined protocol parameter values identifying a particular event or for

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combinations of protocol parameter values and the corresponding records are wholly or partially stored in the event tables (column 11 lines 22-25 and column 11 line 48 to column 12 line 29).

Regarding claim 8, see the rejection of the parent claim concerning the subject matter this claim depends from. GULLEDGE further discloses that the system quality values are displayed graphically, particularly as a histogram (column 16 lines 1-9).

Regarding claim 9, see the rejection of the parent claim concerning the subject matter this claim depends from. GULLEDGE further discloses that the in that the system quality values are correlated with one another with respect to various grouping criteria. (column 16 lines 1-29).

Regarding claim 11, GULLEDGE discloses a system for automated analysis of a mobile radio system which is configured in such a way that the system comprises a conventional public mobile radio network (cellular radiotelephone system infrastructure 2, see column 5, line 9), at least two end terminals for producing test connections, at least one measuring device for determining the protocol parameter values and an evaluation device with a database for storing selected protocol parameter values as data sets and an evaluation device for evaluating the data sets, the evaluation device comprising several modules for calculating each of the module quality values with regard to an appraisal criterion as an average value of a plurality of event quality values, each of which represents a quality measurement for a particular event type, and means for calculating a system quality value as weighted sums of the individual module quality values (see the respective references to GULLEDGE made with regard to Claim 1).

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(see in particular the abstract; column 4, line 57 to column 6, line 15; column 2, lines 45-57; column 3, lines 8-36; column 14, line 39 to column 15, line 28; Figures 1-3, 23-29B)

Regarding claim 12, see the rejection of the parent claim concerning the subject matter this claim depends from. GULLEDGE further discloses means for importing acquired protocol parameter values, means for storing selected protocol parameter values as records and an evaluating unit, the evaluating unit exhibiting a number of modules for calculating in each case one module quality value with respect to an assessment criterion as mean value of a plurality of event quality values which in each case represent a measure of quality for a particular event type, and means for calculating a system quality value as weighted sum of the individual module quality values (see in particular the abstract; column 4, line 57 to column 6, line 15; column 2, lines 45-57; column 3, lines 8-36; column 14, line 39 to column 15, line 28; Figures 1-3, 23-29B)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-7 rejected under 35 U.S.C. 103(a) as being unpatentable over GULLEDGE (US 5,490,204 A) in view of an examiner's official notice.

Regarding claim 5, see the rejection of the parent claim concerning the subject matter this claim depends from. However, GULLEDGE does not disclose that for each event found, the time and a selectable or predetermined leading and/or trailing time is determined and, for these events, relevant data of other events located within the leading time and trailing time are also picked out of the database, are stored in the event tables and the events found are classified on the basis of the data of these relevant events. Nevertheless, the examiner takes official notice that it was known at the time of the invention for measured events, occurring a predetermined amount of time before and after a trigger event, to be stored with the trigger event. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made for an event to be found, a time and a selectable or predetermined leading and/or trailing time being determined and, for these events, relevant data of other events located within the leading time and trailing time that are also picked out of the database, are stored in the event tables and the events found are classified on the basis of the data of these relevant events. This provides useful information that could help determine the cause of the trigger event.

Regarding claim 6, see the rejection of the parent claim concerning the subject matter this claim depends from. GULLEDGE further discloses that an event quality value is calculated for an event in that a) a numerical value is allocated to each signaling message or sequence of signaling messages) an average record is calculated from the records of all events with the same classification in that a mean value is calculated for each protocol parameter value or, respectively, for each numerical value

of the signaling messages, c) an event vector is formed from the mean values of the average record for each event (column 9 line 34 to column 16 line 29). However, GULLEDGE does not disclose that an event vector is subjected to a scalar multiplication by a predetermined event-specific weighting vector. Nevertheless the examiner takes official notice that it is well known for measurements to be scaled when they are to be compared and/or grouped together. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made for event vector is subjected to a scalar multiplication by a predetermined event-specific weighting vector. This allows different events to be taken into account differently.

Regarding claim 7, see the rejection of the parent claim concerning the subject matter this claim depends from. However, GULLEDGE does not disclose the system quality value is calculated with respect to a grouping criterion by a scalar multiplication of a module quality vector, the components of which are the module quality values of the individual modules, by a module weighting vector, the module weighting vector being dependent on the grouping criterion. Nevertheless the examiner takes official notice that it is well known for measurements to be scaled when they are to be compared and/or grouped together. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made for Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made for the system quality value to be calculated with respect to a grouping criterion by a scalar multiplication of a module quality vector, the components of which are the module quality values of the individual modules, by a module weighting vector, the module

weighting vector being dependent on the grouping criterion. This allows different measurements to be taken into account differently.

5. Claim ^{10 is} ~~5-7~~ rejected under 35 U.S.C. 103(a) as being unpatentable over GULLEDGE (US 5,490,204 A) in view of FRANZA (WO 93/15569 A1)

Regarding claim 10, see the rejection of the parent claim concerning the subject matter this claim depends from. However, GULLEDGE does not disclose that at least a speech quality, a duration for establishing the test connection and location, time, speed and direction of movement of the mobile terminal are acquired as external system protocol parameters. FRANZA et al discloses that at least a speech quality, a duration for establishing the test connection and location, time, speed and direction of movement of the mobile terminal are acquired as external system protocol parameters (see in particular the abstract; page 1, line 8 to page 5, line 24; page 44, line 7 to page 45, line 4; Claims 1, 2 and 6; Figures 7 and 8) should be noted, since that document also discloses the essential features of Claims 1, 2, 8 11 and 12). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made for at least a speech quality, a duration for establishing the test connection and location, time, speed and direction of movement of the mobile terminal are acquired as external system protocol parameters. This provides useful information that could help determine the cause of the signal problems.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond B. Persino whose telephone number is (703) 308-7528. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on (703) 308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Raymond B. Persino *RP*
Examiner
Art Unit 2682

RP


LEE NGUYEN
PRIMARY EXAMINER